UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,765	05/27/2004	Li-Chun Tu	MTKP0069USA	3764

			EXAMINER
27765	7590	12/05/2006	ELMORE, REBA I

NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION
P.O. BOX 506
MERRIFIELD, VA 22116

ART UNIT	PAPER NUMBER
2189	

DATE MAILED: 12/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/709,765	TU ET AL.
	Examiner	Art Unit
	Reba I. Elmore	2189

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 September 2006</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-39</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-39</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☒ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-39 are presented for examination.

SPECIFICATION

2.   Acknowledgment is made of applicant's claim for foreign priority based on applications

filed in Taiwan on 5/29/03 and 8/27/03. It is noted, however, that applicant has not filed a

certified copy of the 092114631 and 092123664 applications as required by 35 U.S.C. 119(b).

3.   The specification has not been checked to the extent necessary to determine the presence

of all possible minor errors. Applicant's cooperation is requested in correcting any errors of

which applicant may become aware in the specification.

35 USC § 112, 1ˢᵗ PARAGRAPH

4.   The remaining rejections of claims under 35 USC 112, first paragraph are ***maintained***

and repeated below. Claim 39 is added to these rejections.

5.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making
> and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it
> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his invention.

6.   Claims 1-39 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with

the enablement requirement. The claim(s) contains subject matter which was not described in

the specification in such a way as to enable one skilled in the art to which it pertains, or with

which it is most nearly connected, to make and/or use the invention.

7.   Independent claim 24 has limitations which state 'reducing an executing speed of the

microprocessor emulator for a certain period' and 'executing the microprocessor emulator at a

*****

normal speed after the certain period', however, this language is not explained in the

specification or drawings. The 'certain period' is not defined in the specification and this time

period cannot be determined from either the specification or the drawings.

8.   Further elements used in the specification require some type of definition or explanation

because these elements are not clearly defined in the memory arts. Examples are:

   a) buffering/controlling device – the specification does not define what type of devices

   are used for this buffering/controlling device, they are not typically the same element in a

   memory circuit;

   b) microprocessor-operating-speed control device – the specification does not define or

   explain what comprises this device;

   c) outputs an operating clock – clock signals are output by some elements but the

   operating clock itself is not 'output';

   d) the specification does not define a 'data clog';

   e) how does the operating clock disappear, what does this mean in relationship to actual

   circuitry; and,

   f) how is the operating clock recovered, what does this mean in relationship to actual

   circuitry.

35 USC § 112, 2ND PARAGRAPH

9.   The rejections of claims under 35 USC 112, 2nd paragraph are *maintained* and repeated

below. Claim 39 is added to this rejection of the claims.

10.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

   The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the

*****

subject matter which the applicant regards as his invention.

11.   Claims 1-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention.

a) the claim language does not explain how the operating speed of a microprocessor is

dynamically adjusted;

b) it is unclear as to what is meant by the data being either 'well prepared' or 'not well

prepared';

c) the claims state the executing speed of the microprocessor is either lower than the

normal speed or suspended, however, nothing is given in the specification for performing

this action;

d) an external circuit or a circuit installed in the microprocessor is never described in

such a way that one of ordinary skill would know how to make and use it;

e) it is unclear as to what is meant by 'access a predetermined number of digital data', is

this bits of data, bytes of data, data words or data addresses;

f) it is not clear as to how the data being stored in the buffering/controlling device relates

to reducing the operating speed of the microprocessor;

g) what element is used in 'recovering the operating speed' of the microprocessor; and,

h) the buffering/controlling device is claimed as being either a FIFO, DRAM or SRAM,

however, these are memory element and but themselves cannot provide control functions.

It is not possible from either the specification or the claims to determine the scope of this

language or to determine the metes and bounds of the claims.

*****

Due to the ambiguities and confusion in claims 2-21 and 23-26 as cited above, no art has

been applied thereto, see *In re Steele*, 49 CCPA 1295, 305 F. 2d 859, 134 USPQ 292 (1962) and

In re Wilson, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970). The examiner will not speculate as

to the intended meaning.

RESPONSE TO APPLICANT'S REMARKS

12.   Applicant's arguments filed September 28, 2006 have been fully considered but they are

not persuasive.

13.   The specification and claims fail to discuss details for enabling a buffering/controlling

device for controlling the operating clock. Also, having an element called 'microprocessor-

operating-speed control device' does not clearly define an element or device which provides or

enables microprocessor operating speed control.   There are no clock gating techniques given for

making an operating clock disappear. Clock signals are either high or low but they are not

typically described as disappearing.

14.   Latency introduced to a system processing time does not reduce or increase operating

speed. The length of time required to execute a program instruction because data must be

retrieved from a memory device for the buffering/controlling device is not the same as a

processor operation speed. Terminology throughout the specification and claims is confusing in

that the disclosure does not appear to recognize the difference between adjusting an operating

clock and adjusting executing speed of a microprocessor. A clock rate of a microprocessor is

one of the prime determinates of its overall processing speed but the operating clock is not the

same thing as the processing speed.

15.   The buffering/controlling device is now claimed as comprising a FIFO storage structure,

*****

a dynamic random access memory (DRAM) or a static random access memory (SRAM),

however, the controlling aspect of the device is never explained or discussed.

16. All systems have clocks for timing operations, therefore, describing steps in relationship

to 'a certain time' or 'the certain time' is so broad as to be meaningless and therefor indefinite.

OFFICE ACTION FINALITY

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

CONCLUSION

18. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Reba I. Elmore, whose telephone number is (571) 272-4192. The

examiner can normally be reached on Tuesday and Thursday from 7:30am to 6:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the art unit supervisor

*****

for AU 2189, Reginald G. Bragdon, can be reached for general questions concerning this

application at (571) 272-4204.   Additionally, the official fax phone number for the art unit is

(571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the Tech Center central telephone number is (571) 272-2100.

Reba I. Elmore
Primary Patent Examiner
Art Unit 2189

Thursday, November 30, 2006

*****